



Argonne User Facilities Data Integration

Susan Strasser

Manager, APS User Administration and Support

***Joint Meeting of User Facility Administrators &
User Executive Committee Chairs***

Oak Ridge National Laboratory

March 8-9, 2005

Argonne National Laboratory



*A U.S. Department of Energy
Office of Science Laboratory
Operated by The University of Chicago*



Outline

- **ANL User Facilities Overview**
- **Issues for Multiple-Facility Users**
- **Status: ANL DOE/BES User Facility Data Integration**
- **Status and Plans: APS User Data Integration**
- **APS General User Proposal System**

Argonne User Facilities Overview

- **Four DOE/BES Facilities:**

- Advanced Photon Source, 2773 FY2004 unique users
- Center for Nanoscale Materials, 0 FY2004 unique users (early Access User Program began in FY2005)
- Electron Microscopy Center, 128 FY2004 unique users
- Intense Pulsed Neutron Source, 279 FY2004 unique users

- **Other ANL User Facilities:**

- Argonne Tandem Linac Accelerator System (ATLAS)
- Atmospheric Radiation Measurement Climate Research Facility
- Rare Isotope Accelerator (RIA) ??????????????

- **New Associate Laboratory Directorship Created: Scientific User Facilities**

- APS and IPNS included
- Murray Gibson, APS Director, is also SUF ALD

Issues for Multiple-Facility Users

- **The same or similar information is collected multiple times.**
- **Data incorporated into ANL-wide systems from multiple facility systems creates redundancy - and inaccuracies!**
- **Access approval for non-U.S. citizens is confusing and sometimes delayed.**
- **For experiments requiring multiple-facility access, multiple proposals and multiple safety screening processes may hinder or prevent timely (and needed) access.**
- **Many CNM users WILL SOON need concurrent access to APS, EMC, and IPNS; problems need to be resolved!**

ANL DOE/BES User Facilities Data Integration

- **Common User Registration System** (accessible from ANL Home Web page and individual facility pages) ✓
- **Newly created Argonne User Facilities Orientation course (ESH100U)** includes training information common to all facilities ✓
- **APS, CNM, and EMC User training tracked in ANL-wide Training Management System (IPNS soon)** ✓
- **Proposal submission systems for APS, CNM, and (soon to be) IPNS have a similar look and feel; all facilities draw user bio info from central registration database - but they are still separate systems**
- **Centralization of process for safety reviews for APS, CNM, EMC, and IPNS under discussion**

ANL's DOE/BES User Facility Registration System

- **Single Web access point for all DOE-BES user facilities at Argonne (APS, CNM, EMC, IPNS)**
- **Allows requests for single or multiple facilities in the same or different visits**
- **Satisfies security requirements for non-U.S. citizen users**
- **Includes facility-specific information**
- **System specifications developed collaboratively by all facilities**
- **System operation began October 1, 2003; positive feedback**

(Identified as a DOE “Best Practice” in 2003)

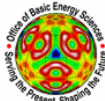
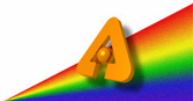


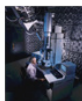
ANL DOE-BES Central User Facility Registration System - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Reload Home Search Favorites Media Print Mail AutoFill Options

Address http://beam.aps.anl.gov/pls/apsweb/ufr_main_pkg.usr_start_page Go Links

Google Search Web 219 blocked AutoFill Options

Argonne National Laboratory's National User Facilities On-Line Registration System

For access to any or all of the following Argonne National Laboratory national user facilities, you will need to complete this on-line registration form, even if you have previously registered with one or more of the facilities.

If you are a new user, click the "New User" button. If you are a returning user or have registered previously, enter your Argonne or User badge number, last name, and birth date. The information currently in our database will be automatically entered into the registration form; if needed, please update and correct this information. If you can't remember your badge number or have not previously provided your birthdate, click the "New User" button.

If you need assistance, please send email to apsuser@aps.anl.gov.

New Users

If you **have not** been to an ANL DOE-BES User Facility click "New User" below.

Returning Users

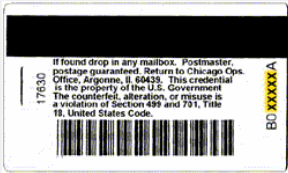
If you have been to a ANL DOE-BES User Facility, please enter the following information and then click "Returning User" below. (All fields are required)

Badge Number*:

Last Name:

Birth Date
(e.g. 21-JAN-1985):

*Your badge number appears on the back of your badge, below and to the right of the magnetic strip. Use the third through seventh digits of this number.



Further Integration/Coordination: Status/Issues

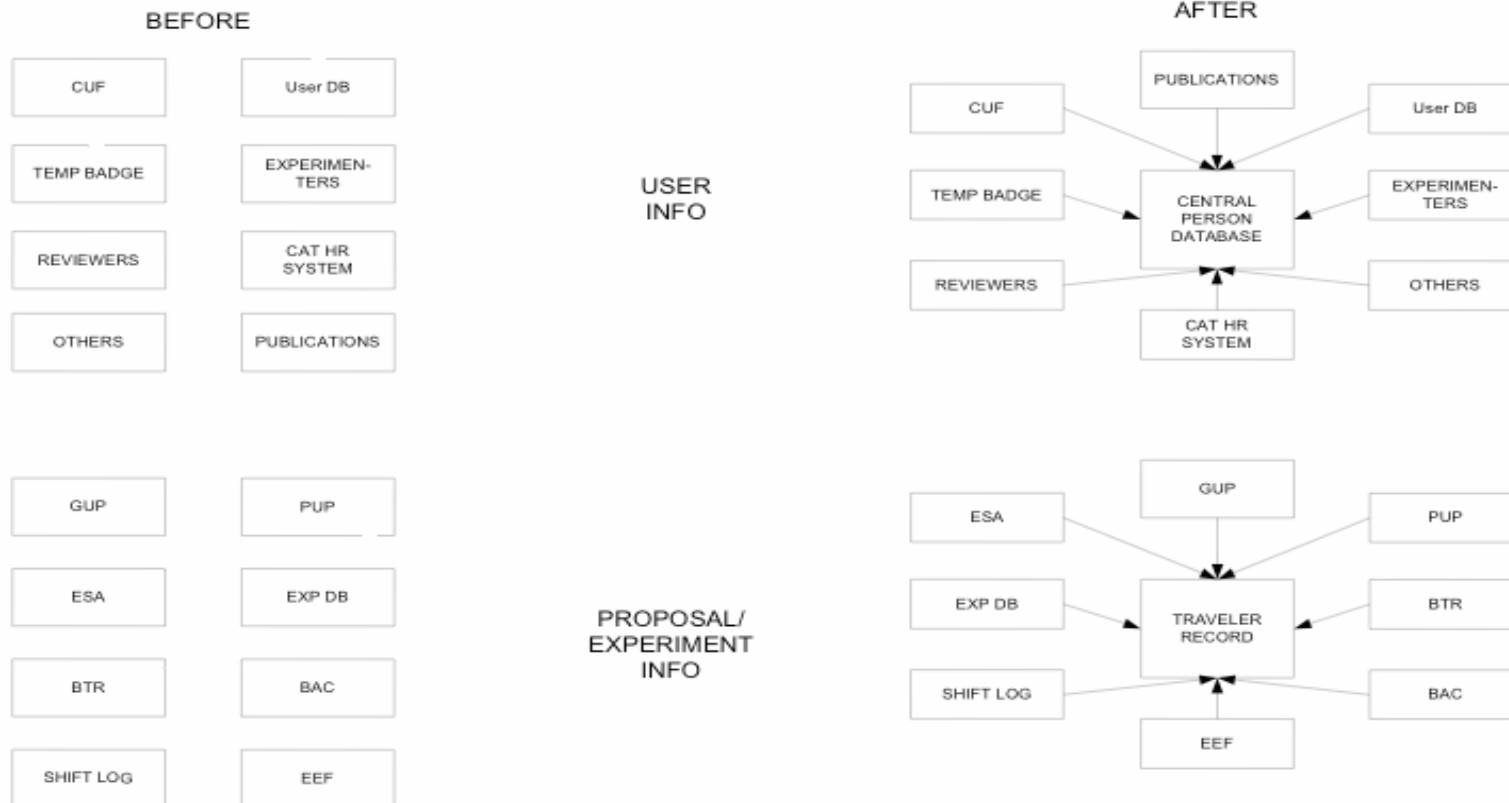
- **No firm commitment (or \$\$) for integration - lots of enthusiasm for idea**
- **Steering Committee with all facility reps not yet established**
- **Neutron facility proposal initiative should be considered (*Al Ekkebus's talk*)**
- **Other user facilities at ANL should be approached again**
- **Stay tuned...**

APS User Data Integration Project Overview

- Objective:** To integrate the multiple APS user- and experiment-related database applications into one easy-to-access Web-based system
- Background:** New Initiative, Single-Year Funding, High Priority
- Justification:** Significant reduction in both MIS and administrative costs (both APS and beamline) associated with management/maintenance of data systems and reporting
- Consequence:** Continued duplication of staff effort; increasing likelihood of unreliable data; increasing difficulty in meeting DOE reporting requirements
- Cost:** ~1 FTE for one year

Planned APS Data Integration Project

PROPOSED DATA INTEGRATION



User Portal: Suggested Layout

The screenshot shows a web browser window titled "APS User Information Portal". The address bar shows the URL "http://beam.aps.anl.gov/user_portal/bio_data.html". The browser's toolbar includes buttons for Back, Forward, Stop, Refresh, Home, AutoFill, Print, and Mail. Below the address bar, there are links for Microsoft Web Sites, MSN Web Sites, and Apple. The main content area has a dark header with the text "APS User Information Portal" and the user's name "John T. Smith". Below the header, there are links for "Main Menu", "Search Criteria", "Instructions", and "Logout". A horizontal menu bar contains tabs for "Biographical", "Foreign Visit", "User Agreement", "Training", "Proposal", "ESAF", and "Schedule". Below this menu, there are the same links: "Main Menu", "Search Criteria", "Instructions", and "Logout". The form fields are organized into two sections. The first section includes: "Title (Prof., Dr., etc.)" with a dropdown menu showing "--- Choose one ---"; "First/Given Name (no nicknames)" with a text input field; "Middle Initial" with a text input field and a note "(if none, check 'NMI' for No Middle Initial)" next to an "NMI" checkbox; "Last/Family Name" with a text input field; and "Gender" with radio buttons for "Male" and "Female". The second section includes: "Institutional Affiliation (Enter employer or school if you are a student)" with a text input field and a "List" button; and "Department" with a text input field.

APS User Information Portal John T. Smith

[Main Menu](#) | [Search Criteria](#) | [Instructions](#) | [Logout](#)

Biographical Foreign Visit User Agreement Training Proposal ESAF Schedule

[Main Menu](#) | [Search Criteria](#) | [Instructions](#) | [Logout](#)

Title (Prof., Dr., etc.) --- Choose one ---

First/Given Name (no nicknames)

Middle Initial (if none, check "NMI" for No Middle Initial) NMI ☐

Last/Family Name

Gender ☐ Male ☐ Female

Institutional Affiliation (Enter employer or school if you are a student)

Department

Beamline Portal (Two Possible Views)

Sector 2 JANUARY 2004 2004-1						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16
2BMB						
2IDB						
2IDO						
2IDE						
8	9	10	11	12	13	14
00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16
2BMB						
2IDB						
2IDO						
2IDE						
15	16	17	18	19	20	21
00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16
2BMB						
2IDB						
2IDO						
2IDE						
22	23	24	25	26	27	28
00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16
2BMB						
2IDB						
2IDO						
2IDE						
29	30	31				
00 08 16	00 08 16	00 08 16				
2BMB						
2IDB						
2IDO						
2IDE						

Sector 2 FEBRUARY 2004 2004-1						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16
2BMB						
2IDB						
2IDO						
2IDE						
8	9	10	11	12	13	14
00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16
2BMB						
2IDB						
2IDO						
2IDE						
15	16	17	18	19	20	21
00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16
2BMB						
2IDB						
2IDO						
2IDE						
22	23	24	25	26	27	28
00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16	00 08 16
2BMB						
2IDB						
2IDO						
2IDE						
29	30	31				
00 08 16	00 08 16	00 08 16				
2BMB						
2IDB						
2IDO						
2IDE						

Run: 2004-1 Beamline: 2-BM-B

Select experiment:

Jan	Feb	Mar	Apr	Schedule Status:	ACTUAL
1	2	3	4	# Shifts Requested:	18
5	6	7	8	# Shifts Allocated:	19
9	10	11	12	# Shifts Used:	19
13	14	15	16	GUP	1371
17	18	19	20	PEN	02-BMB-2004-1371
21	22	23	24	PI	MACRANDER, ALBERT T. 2-5672 atm@aps.anl.gov
25	26	27	28	Start Date/Shift	25-FEB-2004 2
29	30	31		End Date/Shift	3-MAR-2004 1
				Exclude	Excluded Dates
				<input type="button" value="Submit"/>	

☐ Top-up User Operation in low emittance mode ☐ Machine Studies ☐ Weekends ☐ Shift set aside for Studies/ Machine Intervention as Needed

☐ Non top-up User Operation ☐ Maintenance ☐ Lab Holidays

[Main Menu](#) | [Logout](#)

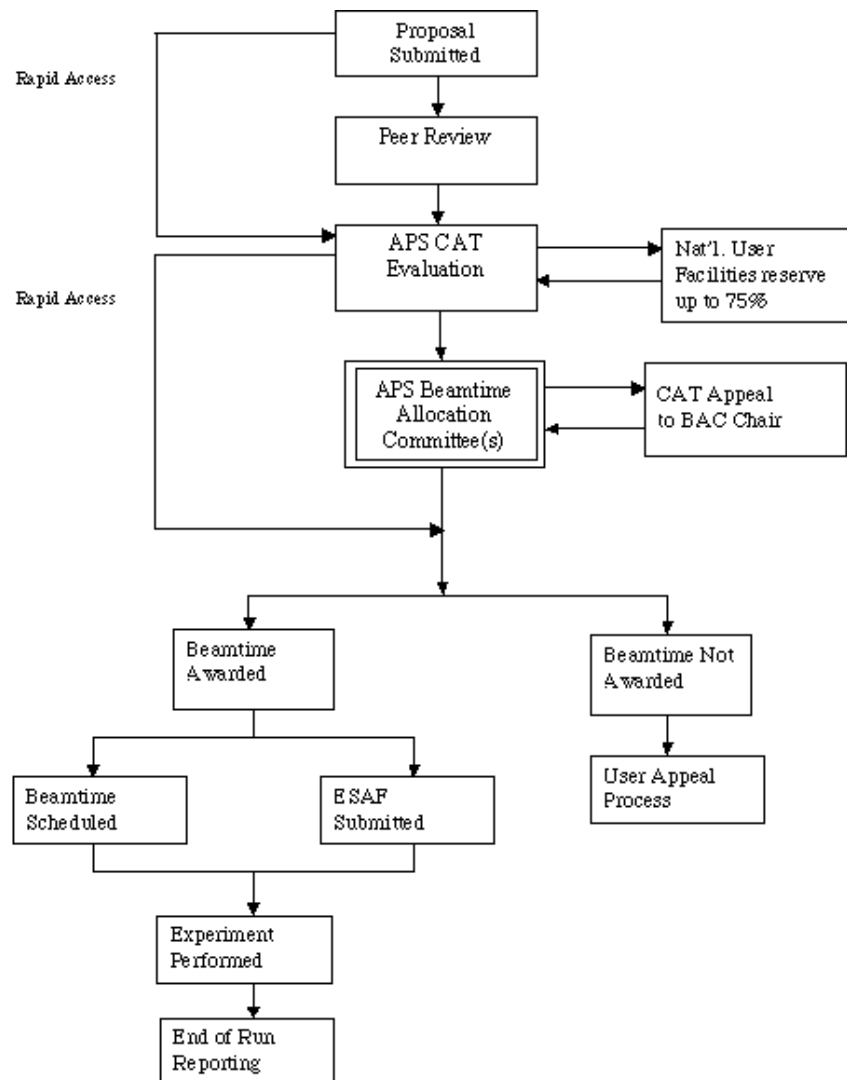
APS User Data Integration Project Status

- **Approved by APS management; high-priority ratings**
- **Current IS group projects prioritized; UDI project highest on new projects list**
- **Change in IS group staffing (from consultants to new permanent hires with fewer FTEs) has caused delays in beginning any new projects**
- **Approval to hire sufficient manpower to complete task expected soon**
- **Again, stay tuned...**

APS General User Program (GUP)

- **GUP has completed two full years of operation**
- **System includes proposal submission, review, allocation (does not incorporate access or scheduling)**
- **Recently reviewed by an appointed committee under the auspices of the APS Users Organization Steering Committee**
 - Preliminary report recommends “tweaks” or minor changes, not a complete overhaul
 - Extensive efforts made to survey APS user community; ~300 responded; basically, APS users are satisfied

Overview of Proposal Process



Procedures for Proposal Submission

APS - General User Program Logon - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Reload Home Search Favorites Media Mail Downloads

Address http://beam.aps.anl.gov/pls/apsweb/gup0005.start_page Go Links

Google Search Web 220 blocked AutoFill Options

APS - General User Program Logon

Logout |

Use your APS badge number to login. If you do not have one, then [request a temporary GUP badge number](#) and use that until you get an APS badge.


Your APS badge number appears on the back of your badge, below and to the right of the magnetic strip. Use the third through seventh digits of this number (highlighted in yellow on the image below).

Logon

Badge No.:

Password:

Logon Reset



Don't know your password ?
[Click here if you have an APS badge number.](#)
[Click here if you have a temporary GUP badge number.](#)

Logout |

ANL

Local intranet

Procedures for Proposal Submission, cnt'd

APS - General User Proposal - Microsoft Internet Explorer

Address: http://beam.aps.anl.gov/pls/apsweb/gup0001.display_exp?l_pid=997589110441454&l_page_num=1&l_operation=UPD_PROP&l_gup_id=2426

Google Search Web 220 blocked AutoFill Options

APS - General User Proposal

Main Menu | Search Criteria | Instructions | Logout

General Experimenters Abstract Beamtime Request Questions Review Panel **Reviews**

Proposal : GUP-2426

Proposal Title: Imaging Release Profiles of Therapeutic Proteins for Bone Substitute Applicati

Proposal Type: Program ☐ Individual ☒ [Rapid Access](#)

Does this research involve macromolecular crystallography (single crystals) ? Yes ☐ No ☒

Will the data collected be considered proprietary ? Yes ☐ No ☒

Will the data collected be considered classified ? Yes ☐ No ☒

Does this research involve human subjects or materials ? Yes ☐ No ☒

Does this research involve live animals ? Yes ☐ No ☒

Are there known safety hazards associated with the proposed experimental procedures or your samples ? Yes ☐ No ☒

Is this research required for a student's thesis ? Yes ☐ No ☒

Is this proposal related to another general user proposal ? Yes ☐ No ☒

If so, which one(s) and how ? Yes ☐ No ☒

(500 characters or less)

The program proposal is related to GUP-1840 in that both materials being studied are porous bone substitute materials. In addition, for GUP-1840 we are staining tissue on the ceramic scaffolds with gold conjugated, monoclonal antibodies. Otherwise, the two are not intimately connected.

Subject of Research:

☒ Materials science ☐ Physics ☐ Chemistry

☒ Polymers ☒ Medical applications ☒ Biological and life sciences

☐ Earth sciences ☐ Environmental sciences ☐ Optics (excluding x-ray optics)

☒ Engineering ☐ Instrumentation related to user facilities ☐ Purchase of specialty service or materials

☐ Other (specify) Specify Other :

Techniques Required: Phase contrast imaging Tomography

Generate Report Copy Proposal Next Page

Proposal # : 2426

Main Menu | Search Criteria | Instructions | Logout

ANL

Done Local intranet

Procedures for Proposal Submission, cnt'd

Proposers must

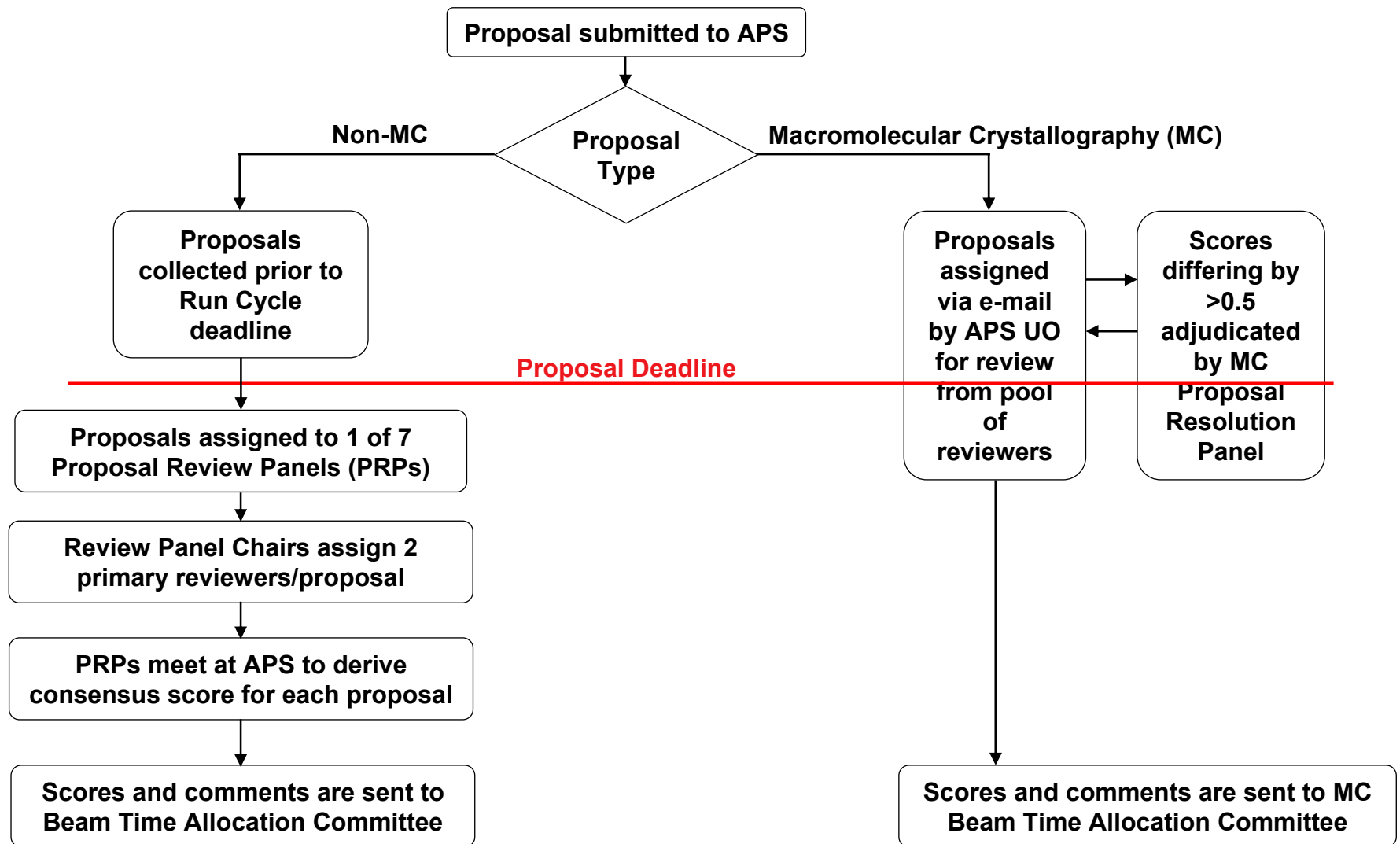
- Choose up to three beamlines, based on their technical needs
- Identify the subject of the research and the funding source
- Provide contact information for the members of the research team
- Explain the need for synchrotron radiation, APS facilities, and beamline capabilities
- Describe the experimental procedure and samples
- Estimate the amount of beam time required and specify any scheduling restrictions

Types of Beam Time Requests

Beam time Request can be for:

- ***Allocation by the Beam Time Allocation Committee*** for the next planned APS Run Cycle
- ***Rapid-access*** : A request for unallocated general user time during the current APS Run Cycle
 - A rapid-access proposal requests immediate use of unallocated general user time at a specific beam line. Evaluation and scheduling are handled by the selected beamline administrator, subject to retrospective review and general oversight by the Beam Time Allocation Committee.

Overview of Peer Review Process



Procedures for Beam Time Allocation

Two BACs meet at ANL to award beam time for new proposals and new beam time requests for existing proposals based on:

- PRP comments and score distributions in current run cycle**
- CAT evaluations**
- User types (students, new users, experienced users, beamline scientists)**
- Outreach to new communities of users**
- Need to continue productive programmatic experiments**

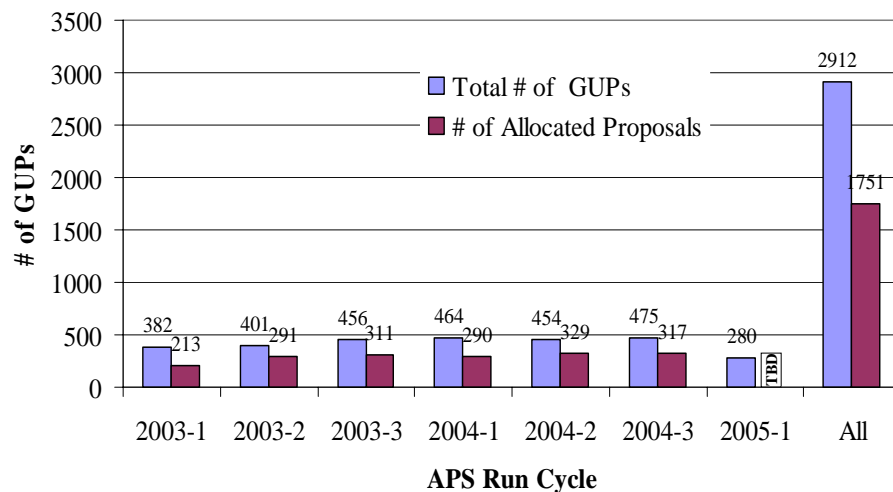
Procedures for Beam Time Scheduling

Beam time scheduling is done by the staff of the beamline to which a proposal is allocated, based on:

- **General User's technical needs**
- **Ability to meet the General User's scheduling requirements**

GUP Statistics

Total and Allocated GUPs



Average Scores

